A Roadmap for AI4LAM

a document from the conference workshop on November 15, 2023

Introduction

As artificial intelligence changes the landscape of content creation, exploration, and storage, those working in libraries, archives and museums (LAM) must adapt to the changing intellectual landscape and come prepared with a plan to react to it. Whether an administrator needs more information about the ethics of using it to create standardized documentation, or a collection development specialist needs to know whether concerns about inclusion of diversity, equity, and inclusion are valid within AI tools, each of these perspectives bring about a limitation that may hinder the adoption of AI in the workplace, leaving the institutions we work for behind.

At the AI4LAM Conference workshop in Vancouver, Canada on Wednesday, November 15, 2023, those working in LAM engaged in a highly interactive World-Cafe style discussion. The session provided a platform for participants to generate fresh ideas, share meaningful examples, and gain a deeper understanding of the essential components required to lead innovation in the area of AI for LAM.

This session was structured into three rounds, with participants choosing tables based on their topic area of interest. Each table had a host who facilitated the discussion during each round and encouraged participants to express their thoughts and ideas through conversation or writing.

- **Round One**: This round had participants share collective knowledge where they introduced themselves and discussed what drew them to their chosen topic. They reflected on their experiences and shared what they hoped to learn about.
- **Round Two**: Participants delved deeper into aspects of their topic, identifying gaps and emerging elements in current understanding. They explored insights and made connections, enriching the discussion.
- **Round Three**: The third round was focused on looking to the future with forward-thinking questions where they envisioned the challenges that faced their topic area and how they might meet them.

At the end of each round, the table hosts provided summaries of the conversations, capturing key points, ideas, and shared perspectives. In this article, we present summaries of each round for every topic area, highlighting the depth and diversity of insights generated during this workshop session.

Leadership and Resourcing

Participants at the leadership and resourcing topic table were tasked with providing perspectives based on apparent challenges for the LAM sector, such as information literacy, a changing landscape of public and community needs, and observing the operational needs of the LAM sector with the potential for increased efficiency in the face of limited resources.

During the first round of discussion, the group was at consensus in recognizing artificial intelligence (AI) as a disruptive force that will need to be reckoned with at all levels of the organization. Concerns about preparedness for this technological shift included questioning the readiness of leadership to guide through these changes. The necessity for proactive strategies over reactive ones was highlighted by several, including a philosophical discussion of change guided by leadership strategy vs. leadership strategy guided by change. The group observed the similarity of AI's potential impact to past technological upheavals, such as the introduction of the world wide web, and suggested that the sector has a long history of embracing technological change. Participants observed a tension between reallocating resources to bolster AI initiatives and the need for maintaining core organization services and values. Staff training and preparedness efforts for AI adoption were discussed in relation to how different new techniques often appear from traditional staff roles. Bridging this gap is a central question.

Round two of the discussion explored the relationship between the LAM sector and vendors of products in the AI domain, raising significant questions and debates on the practicality of monetizing resources versus maintaining open access, and the need for strategies to observe the efficacy of partnership models. Leadership of LAM organizations was agreed to be ultimately accountable for ensuring equitable access to technology and resources in ways that do not run afoul of patron expectations of privacy and data security. Discussion also revolved around the monetization of content and the use of commercial AI solutions, weighing potential risks against benefits. Regulatory and compliance issues spark discussions on whether to slow down, constrain, or expedite AI adoption, with differing perspectives promoting each of these directions. The conversation prompted a call for the reevaluation of libraries' roles in society, helping not only the organization, but the broader community to adapt to technological advancements. There was agreement about establishing meaningful, non-extractive partnerships with tech companies, drawing lessons from initiatives like Google Books. Additionally, there's an acute awareness of the transformative impact on the workforce, necessitating proactive management of this transition to ensure a fair and equitable transition to new workflows and methodologies in the sector.

The third and final round discussion focused on the future of jobs and roles in the context of change, and underscored the need for staff to adapt and embrace new technologies. There was deliberation on the appropriate pace of AI adoption in the LAM sector, questioning organizational strategy cycles as being either too rapid or sluggish. Opportunities identified for forward momentum included the formation of communities of practice for AI methods in teaching, research, and administration. Additionally, there's contemplation over instituting new organizational models that incorporate AI as an essential element of library services, such as AI

assisted workflows in digitization, transcription, discovery, cataloging, and research assistance. Awareness of labor dynamics highlights the divide between those welcoming change and those apprehensive, reminiscent of past technological transitions. A final consensus developed around the importance of developing new skills and workflows within the LAM sector to keep pace with AI advancements, lest organizations risk obsolescence.

Ethics and accountability

The participants at the table discussing ethics and accountability brought up points that reached across multiple topic areas. One of the key questions the participants at this table discussed during round one is ‘why does ethics and accountability matter?’. It was discussed that ethics is considered a foundational aspect that requires integration from the beginning rather than an afterthought. It matters who the creators are and who they are accountable to - relaying the importance of being more transparent (and ways LAMs can assist this). There was a feeling that a new ethical framework, or at least an evolved version of existing ethical practices, would need to be adopted for this technology to thrive in the LAM space, a challenge LAMs have faced before.

Round two focused on the LAM relationship with vendors. LAMs should be clear about their ethical standards when going into conversations with vendors, with an opportunity to bring conversations about ethics to the forefront. There should be a communication channel across LAMs to share agreements to consider past mistakes or successes. For example, some libraries have chosen to drop ProQuest because of their data policies/ethics while others question NVivo’s data privacy practices. Libraries need clear ethical value statements that allow assessment of vendor solutions before adopting the new product. A set of value-added questions regarding data rights and user privacy would be warranted. It might also be wise to consider impact on staff, students, researchers, community users, and institutional practices.

The final round focused on the need for increased conversation and collaboration among LAM institutions to tackle this issue. One successful example of this is the shared data carpentry workshops. Knowing the limits of the LAM sector in always being slightly behind corporate business, is vital to understand the right balance in keeping up with the technology while providing an ethical lens that people depend on LAMs to provide. We must also acknowledge our limits to provide competitive salaries to top programmers. The sector can focus on selecting projects grounded in ethics that start a conversation with students. It might also focus on minimally changing existing principles to bring in ethics to protect rights against solely corporate interests. Challenges and resources also presented themselves during the discussion. Challenges include existing laws around privacy and copyright and whether or not they apply to AI, a pull between wanting to act and proceeding with caution (especially as directed by US Congress), and the role of informed consent. Resources shared included The AI Ethics Brief by the Montreal AI Ethics Institute.

Data and workflows

Round one of discussion on data and workflows found consensus in the notion of utilizing data to enhance descriptions in library and archival resources, where AI-generated data is likely to be preferable to no descriptive data at all. This discussion also highlighted the potential of AI in translation and transcription, with some observations that the techniques are less effective with non-English languages. In contrast, chatbots were considered potentially beneficial in assisting non-native speakers, suggesting the need for more study on applications and limitations. The group also deliberated on the intricacies of screening sensitive information, such as personal, copyrighted, or works without clear ownership. Conversational library chatbots, and the appraisal of large digital collections were also key points. Conversation underscored the importance of building trust in AI outputs, stressing the need for reliable AI tools that merge new methods with institutional values.

Participants in round two expressed concern about limited documentation on AI projects and a lack of assessment practices, which stifle successful deployment of projects. There was an agreed upon need for further understanding the relevance of AI tools to users, strategies for selection of AI workflows, and metrics to evaluate user helpfulness. Proof of concept projects are not ready for introduction into default patron workflows, as they need to be tested, refined, and documented first. There were also concerns about sustainability of long-term viability of projects, especially in an era where ‘shiny-pilots’ tend to dominate perspectives of the future. The group also noted the difficulties in discerning human users from robots in analytics, citing an example of increased digital collection stats post-Chat GPT release. Scaling AI work requires significant and sustained effort, and the notion of 'quick wins' is often illusory.

Round three’s discussion revolved around expanding discussions and collaborations on AI, as seen in initiatives like the University of Queensland's AI Collaboratory. This multidisciplinary platform encourages participation without requiring a technical background, aiming to move forward beyond the hype. There was a call for more case studies and collaborative implementations to gauge the actual benefits to users. The feasibility of smaller labs creating their own AI models and the future trajectory of AI in aiding effective decision-making were also discussed. The need to prioritize projects, like enhancing underutilized subject guides, was underscored in this context.

Access and Usability

The topic of access and usability was added later as an additional topic to discuss because previous workshops for AI4LAM talked about but didn’t dive deep into ways LAM users and services adapt because of AI technology. There seems to be a dichotomy presented between the haves and have nots when it comes to access and usability. There is a chance that AI can completely transform the usability and experience of LAM spaces for some patrons while others may be left out of the new informational rewards. The group discussed the need to have AI available to LAM users, but also accessible to library employees to practice and gain familiarity with the technology. A challenge presented itself in how fast-paced the technology is in this

space and the group reiterated that a shared framework around assessment would be helpful when trying to find which AI tool would be most helpful.

Round two expanded upon the tail-end of the conversation from round one on assessing the quality of AI tools. The first opportunity for LAMs is to have access to several tools and evaluate them critically. The group determined that a tools' usability can be based on shared understanding of language as a tool to bring access to once undiscoverable items. For example, objects can be identified by their content and not just by their metadata. This also brought to mind the idea that "hidden" items not shared in training models may be lost or forgotten (for example, the AI tool Research Robbit doesn't include books). At the end of the session, the group discussed how this technology is causing the digital divide to both widen (more ethical questions) and closing (less need to specialize in programming languages). They also discussed the need for the library to become a lab for AI prototyping and research.

The last round started with a conversation about training GPTs on LAM collections. They brought up examples of training one for reference questions or discovering specific items in a collection. An overwhelming problem exists for adoption though - the need for dedicated staff and funds to support pilots for using this technology (even for those that are abandoned/fail). A need for general understanding and discussion, especially among administrators, around this technology then became a way forward. A lecture series and reading club could help.

Conclusion and Actionable Roadmap

This report highlights key aspects of in-depth roundtable discussions on the AI topics of leadership and resourcing, ethics and accountability, data and workflows, and access and usability. LAMs can play an important role in adoption and careful rollout of AI technology. By following points made in this roadmap, we can start to address challenges, embrace innovative approaches, foster frameworks, and share resources with each other and our communities in the ever-evolving AI landscape.

1. Formulate strategy for integrating ethical considerations into all aspects of AI adoption.
2. Developing a structured approach to staff training and AI literacy.
3. Establishing guidelines for vendor relations and AI tool assessment.
4. Creating communities of practice to share insights and foster innovation.
5. Prioritizing projects and initiatives that align with LAM values and user needs.

Acknowledgement

Summaries of discussions were drafted and edited by Brandon Patterson and TJ Ferrill in collaboration with ChatGPT-4.

We'd like to thank the conference workshop participants who contributed to the discussion and lended their expertise to the topic areas. The workshop participants included: Weiwei Shi,

Andrew Martlew, Jon Donn, Sally Vermaaten, Fridda Flensten-Jensen, Jonathan Young, Jeremiah Colonna-Romano, Bryan Ryde, Francesco Ramigni, Xuemao Wang, Javier de la Rosa, Mike Hucka, Yinlin Chen, Michele Gibney, Martin Sevigny, Rachel Senese, Bjarne Andersen, Karen Munro, Michael Ridley, Mia Ridge, Hal Loewen, Vessela Ensberg, Dianne Cmor, Glen Horton, Stu Snydman, Tom Cramer, Sven Arne Brygfeld, and Carina Thornes.

The methods used during this conference session were based on those created by the World Café Community Foundation (https://theworldcafe.com). Slides used during the workshop can be found via this link.